

Breakout Session Assignments and Goals

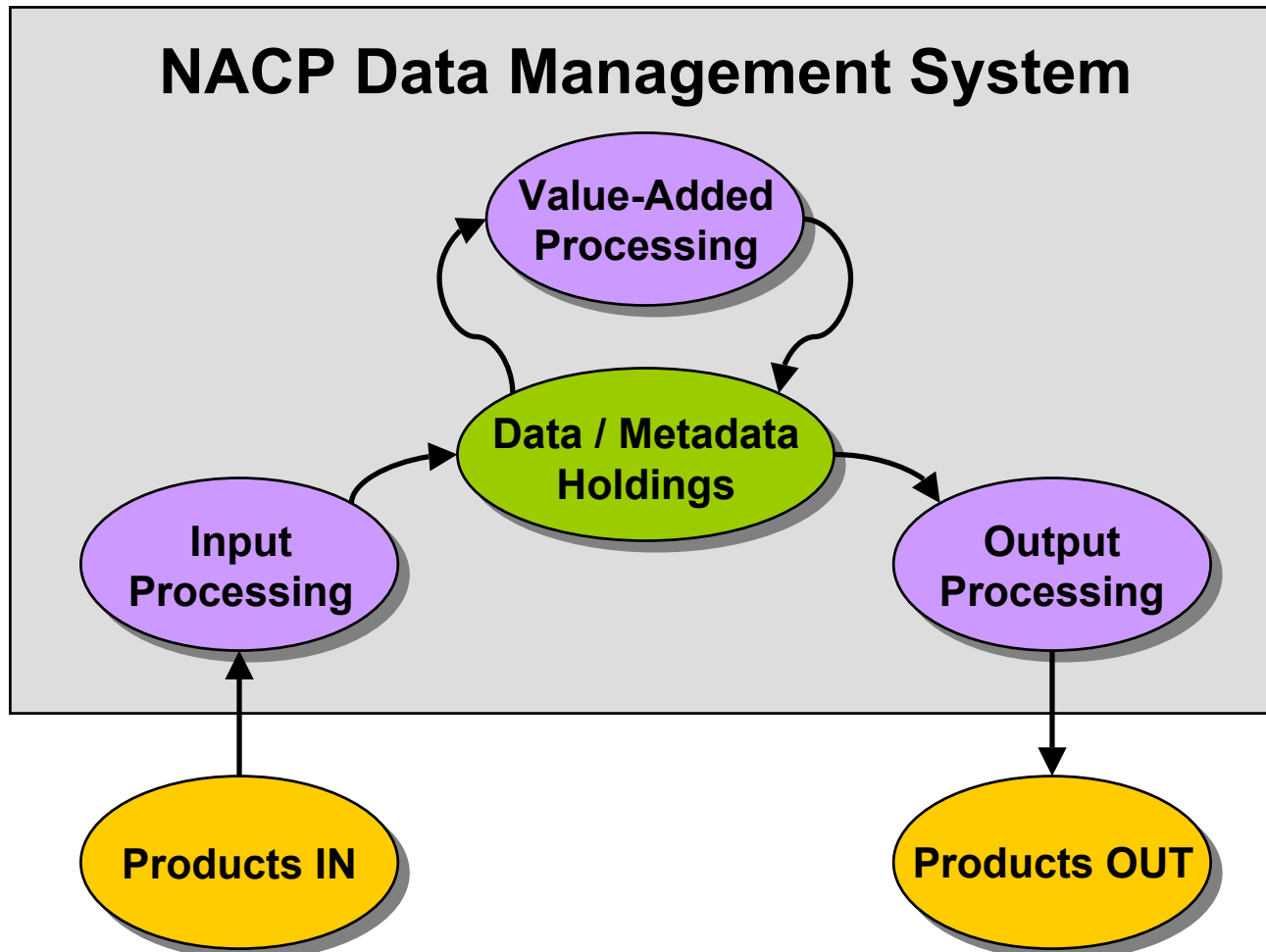
Summary of Objectives and Charge to Breakout Groups

- Desired outcome: a comprehensive vision for NACP Data Management System
 - Clarify the system requirements
 - Produce a strategy for design, development, and implementation that addresses available options and resource requirements
- Initial design criteria:
 - Centralized access to NACP data
 - Make effective use of existing data management infrastructure
 - Plan for broad spectrum of data types
 - System should be “flexible”

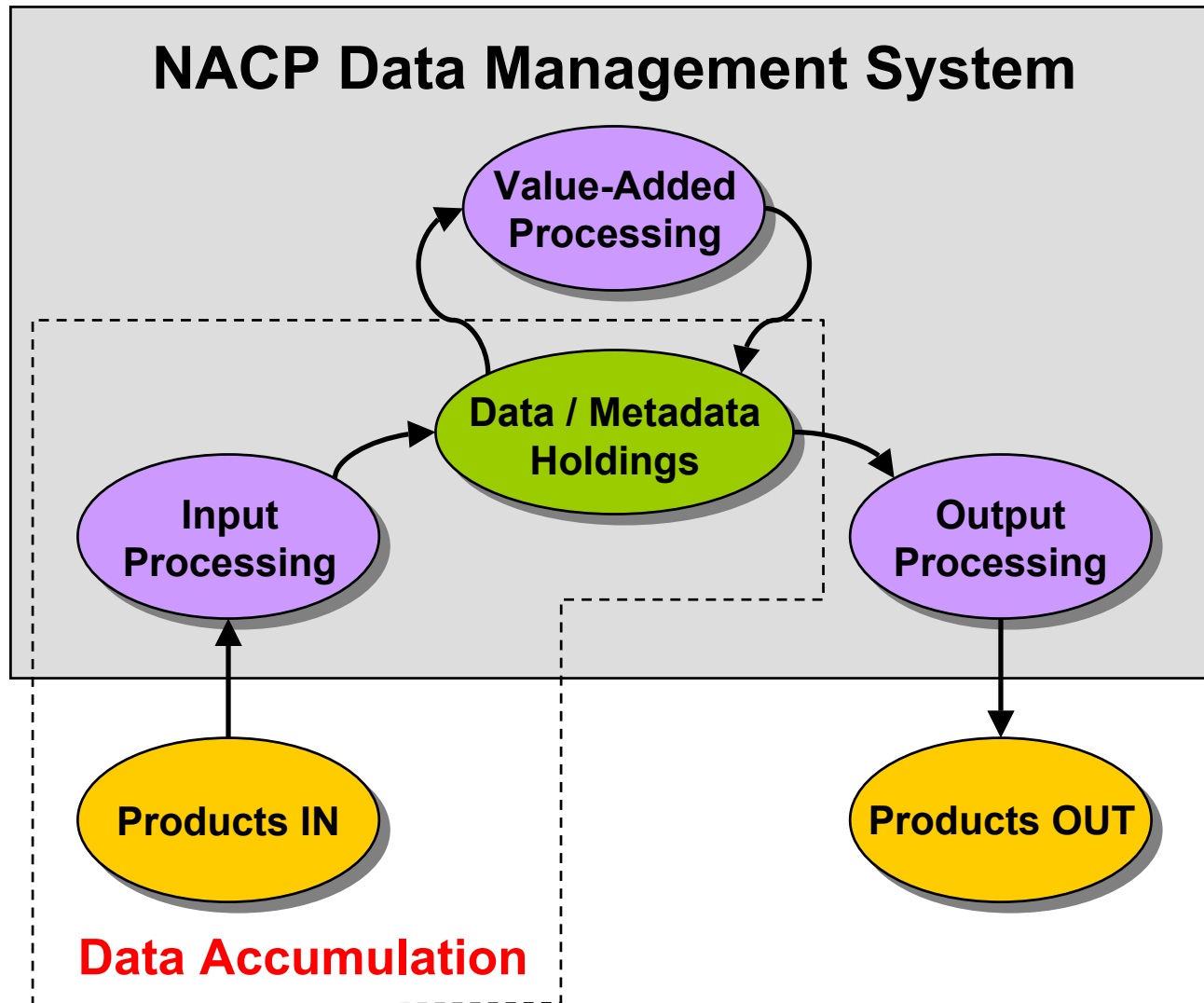
Breakout Groups

1. Data Accumulation
2. Quality Assurance / Quality Control for NACP Data Products
3. Data Distribution and Access
4. Value Added Products

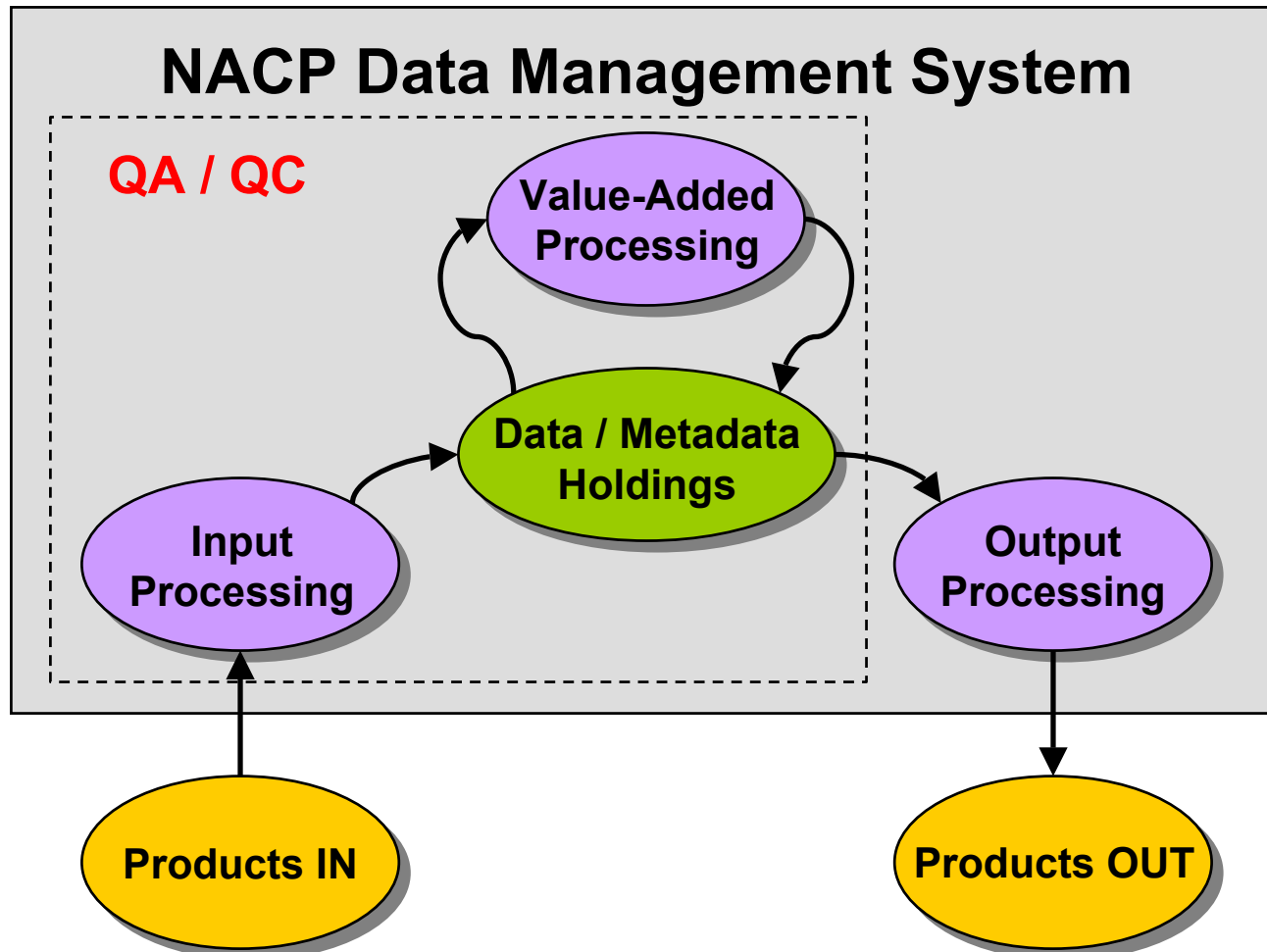
Data Framework Schematic and Breakout Group Topics



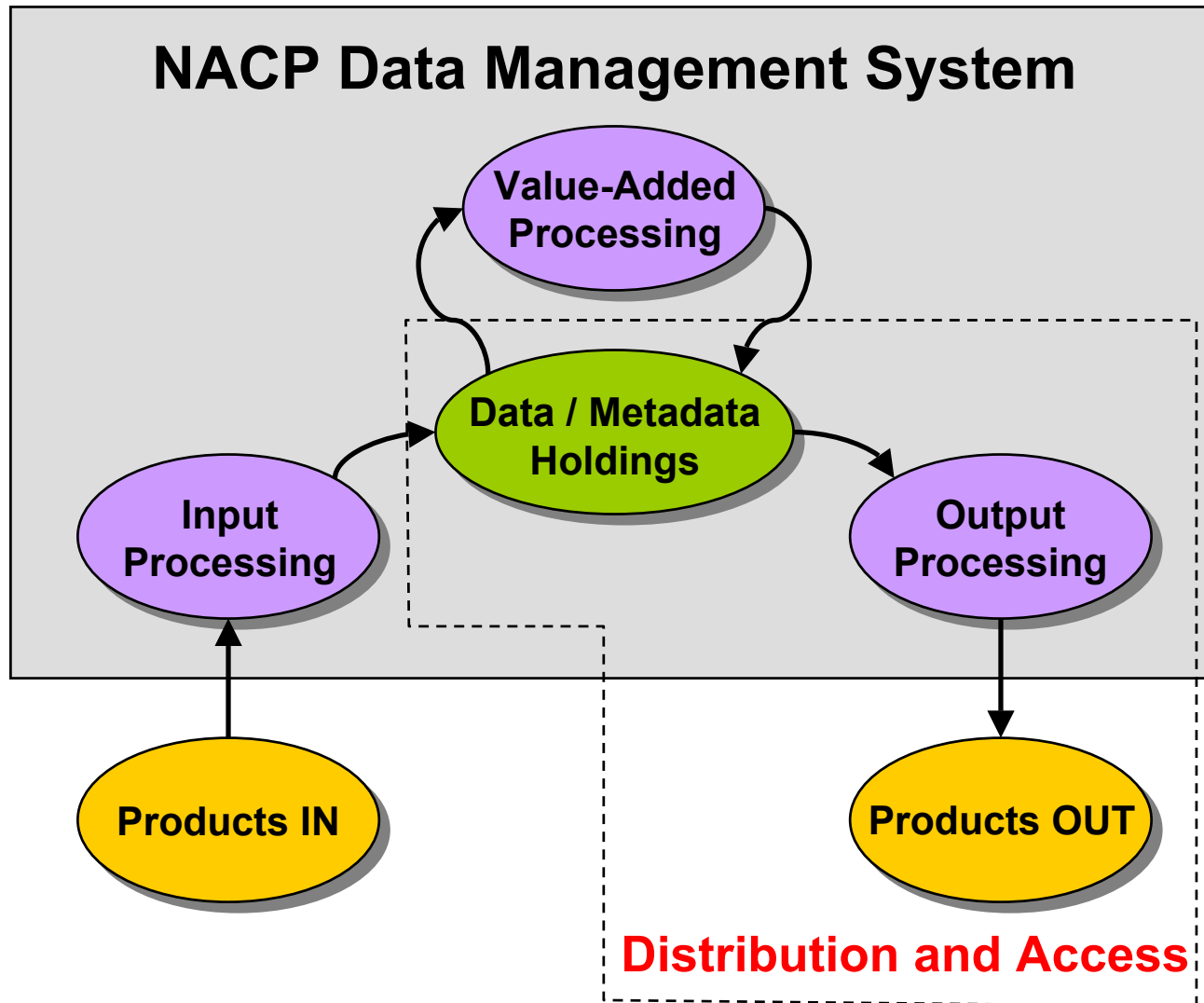
Data Framework Schematic and Breakout Group Topics



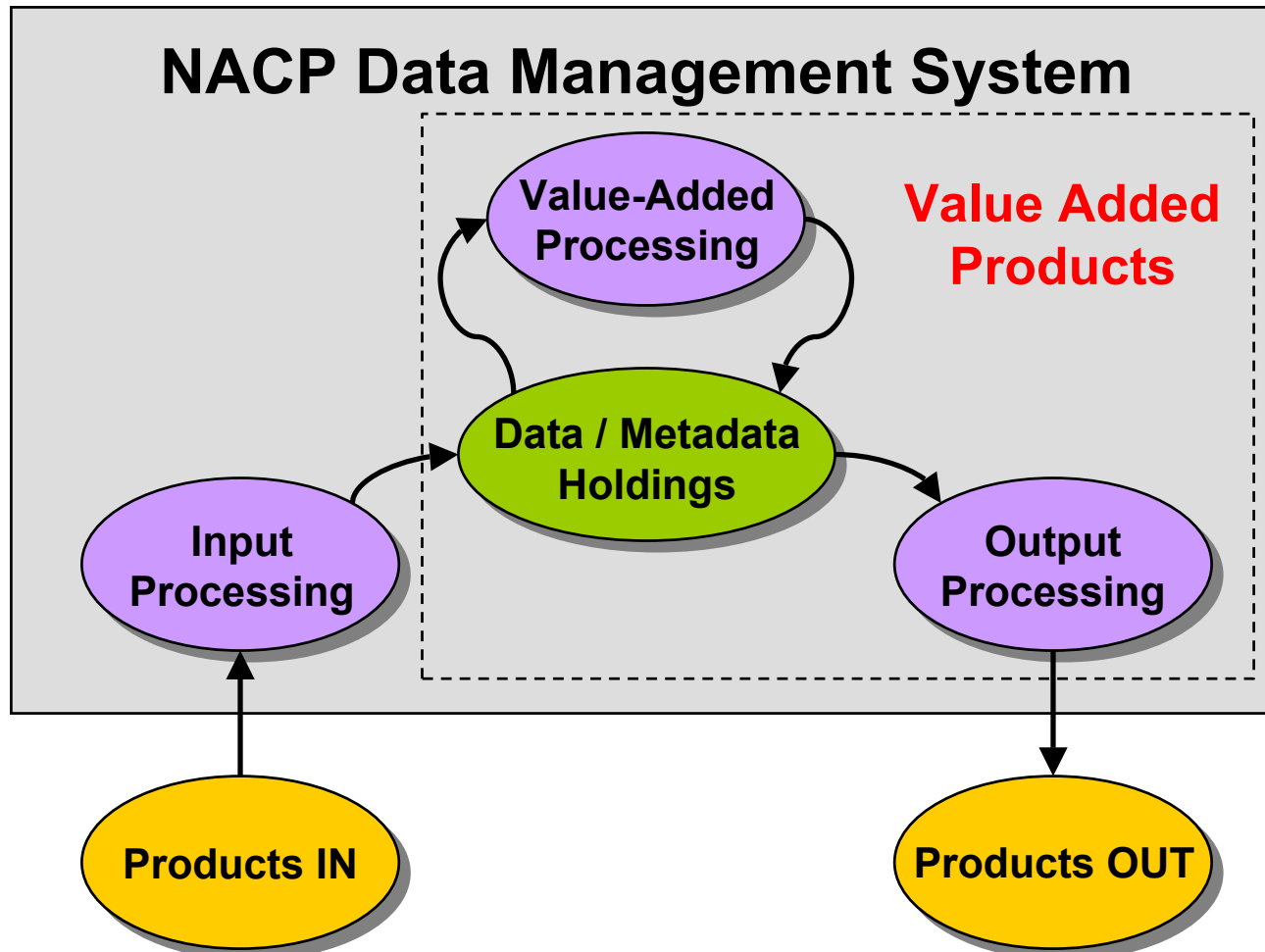
Data Framework Schematic and Breakout Group Topics



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Data Framework Schematic and Breakout Group Topics



Some questions to help frame the
initial breakout group
discussions...

Data Accumulation Breakout Group (1)

1. "Where" does NACP data accumulation occur? Is it a central facility or is it a distributive network?
2. How are the data stores "classified" or "organized"? By scales of time and space? Scale of model?
3. What data formats will be used? One format for input parameters (measurements and observations) and an alternative format for model output results?
4. What are the data content quality standards used for the NACP data?
5. What is the metadata content? Federal Geographic Data Committee (FGDC) standards for public data versus internal standards (NetCDF) for internal users?
6. What is the lifetime of the data? Duration of NACP or longer time archive?

Quality Assurance / Quality Control Breakout Group (2)

Can we...

1. identify what measures of uncertainty and bias should be reported with data and data products?
2. adopt existing guidelines for evaluating and expressing uncertainty of data e.g., American National Standards Institute (ANSI/NCSL)?
3. establish a protocol for including QA/QC data with measurement data submissions?
4. produce QA/QC information in a user-friendly (useable) format?
5. establish a mechanism for documenting/summarizing the QA/QC status of all data sets?
6. establish a mechanism for documenting/summarizing known data problems?
7. identify who is responsible for what aspects of QA/QC?

Data Distribution and Access Breakout Group (3)

1. Are the data management center(s) of the NACP to act as an archive, a distribution portal, or both?
2. Should the communication protocols be established in advance?
Once the communication protocols are established, the modes of access are known and software for manipulation can be developed.
3. NACP needs to decide, will its database(s) be open access, semi-open access, or restricted access?
 - Will NACP share their data products with international clearinghouses (e.g., share metadata with GCMD and Geospatial-One-Stop)?
4. Will/should the various data management nodes have advisory committee of users?
5. Are there easily identified, high-profile databases needed by NACP scientists, but not produced by NACP scientists?

Value-Added Data Products Breakout Group (4)

1. How should effort on value-added products be organized?
 - NACP Data Center, existing research teams, or data centers
2. Where will scientific guidance come from and how will it be organized?
 - Science teams, community involvement in planning
3. What general data manipulation capabilities will be required? Should these efforts be centralized at an NACP data center?
4. What computational storage resources will be required to handle value-added products?
5. Identify value-added products in several categories:
 - ecosystem processes; atmospheric processes; ocean processes; remote sensing products; other categories?

Breakout Groups

Data Accumulation

- *Leader: Rick Hooper*
- *Rapporteur: Thomas Reinsch*
- *Steering Committee: Sharon Waltman*

Quality Control / Quality Assurance

- *Leader: Jeff Goebel*
- *Rapporteur: Linda Heath*
- *Steering Committee: Ken Masarie and Scott Denning*

Data Distribution and Access

- *Leader: John Dwyer*
- *Rapporteur: Tim Rhyne*
- *Steering Committee: Rich Birdsey and Dave Glover*

Value-Added Data Products

- *Leader: Tom Loveland*
- *Rapporteur: Dennis Ojima*
- *Steering Committee: Bev Law and Peter Thornton*

Extra slides...

Cross-Cutting Issues for each Breakout Group

- Data Framework
 - Overall data management objectives
 - High priority data products
 - Identify near-term activities (pilot / prototype) as well as long-term activities
 - Key elements of a data policy
 - Centralized vs distributed data system
 - Acquiring data and documentation from investigators and transferring to an appropriate archive

Workshop Report

- Recommendations to the CCIWG on
 - data management system design
 - From four breakout groups
 - identify near-term activities (pilot / prototype) as well as long-term activities
 - resources required
 - interfaces between agencies and data centers
 - elements of an NACP Data Policy
 - how to exert oversight and management of the NACP Data Management Program